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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,532

01/27/2005

Masao Imai

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BUCHANAN, INGERSOLL & ROONEY PC
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EXAMINER

MCLENDON, SANZA L

ART UNIT

PAPER NUMBER

1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/522,532

Applicant(s)

IMAI ET AL.

Examiner

Sanza L. McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1.9/05 & 8/06</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION
Information Disclosure Statement

1. The information disclosure statement filed January 27, 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 5 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 5 and 15 recites the limitation "Y1 and Y2 groups" having the general formula (1) in line 2. There is insufficient antecedent basis for this limitation in the claim. There are no Y1 or Y2 groups in the formula (2) from which these claims (5 and 15) depend. The examiner is assuming claims 5 and 15 should depend from claims that have general formula (1) in them, such as claims 1 and 2. Appropriate action is requested.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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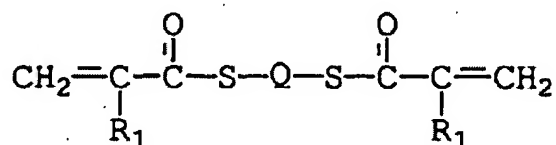
5. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

6. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herold et al (03/011925) in view of Toh et al (6,172,140).

Herold et al teaches high refractive index optical resin compositions for optical materials and applications. Said composition comprises a mixture of thio (meth) acrylate compounds selected from compounds having general formulas I and II, a radically polymerizable monomer having at least two (meth) acryloyl groups selected from compounds of groups (i), (ii), (iii), and (vi), optional polythiol compounds (p. 13-14), optional urethane (meth) acrylate compounds (p. 16-17), optional ethylenically unsaturated anhydride compounds (p. 15), optional monomers having one ethylenically unsaturated group (p. 16-18), radical polymerization initiators (p. 20-21), and other conventional additives (p. 22-23).

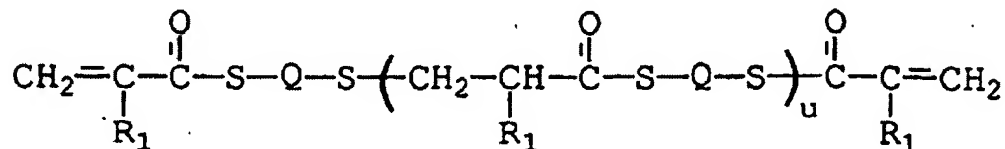
General Formula I and II:

I



in which R₁ is hydrogen or methyl, and Q is a divalent linking group selected from linear or branched C₂-C₁₂ alkylene, C₄-C₁₂ cyclic alkylene, C₆-C₁₄ arylene and C₇-C₂₆ alkarylene, the carbon chains of Q may optionally contain at least one linkage selected from the group consisting of ether, thioether and combinations thereof; and

II



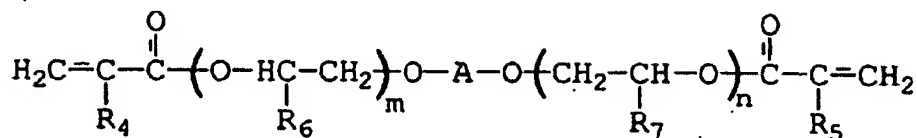
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It appears that at least one of these formulas reads on applicant's bifunctional methacrylic acid (thio) ester. Compounds (i), (ii), and (iii):

Compound (i)

10

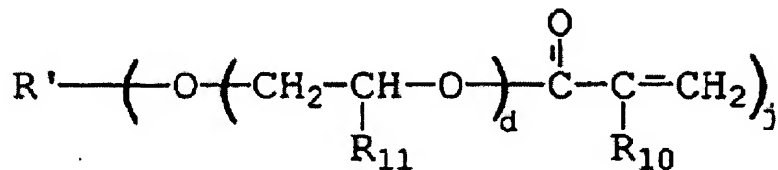
III



compound (ii) is a methacrylic acid ester of a polyethylene glycol

compound (iii)

V



and, compound (iv) is a combination of (i), (ii), and (iii). General formula I above appear to overlap with applicant's thio (meth) acrylate compounds in claims 1-2 and the formulas of claims 4-5, 9-10, 15-16 and 20. The polythiols appear to read claims 3 and 14. The urethane (meth) acrylate compound reads on the same limitation in claim 1. The photoinitiators set forth on pages 20-21 appears to read on the photoinitiator of claim 1. The difference between the instant claims and the compositions set forth by Herod et al is the definition of general formula (1) as instantly claims providing for at least one of the linking Y groups to be a hydroxy group (OH).

However, Toh et al teaches compounds of general formula (1) as instantly claimed are known in compositions for making optical parts.

Toh et al teaches acrylic thio monomers for making optical parts comprising a methacrylic acid (thio) ester, a polymerizable compound, a polythiol, a photoinitiator, monomer ethylenically unsaturated monomers, urethane acrylate monomers and the like. The polymerizable compound set forth by Toh et al can be a high index bisphenol monomer, such as a dimethacrylate or diacrylate ester of 4,4'-bishydroxyethoxy bisphenol A—see column 7. Herod et al and Toh et al are analogous art because they are from the same field of endeavor that is the art of high abbe number compositions comprising (thio) methacrylate esters for use in optical part applications. Therefore, it would have been obvious for a skilled artisan of ordinary level to use the high abbe number hydroxyethoxy bisphenol A methacrylate

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compound, as set forth by Toh et al, in place of the compound (i) in the composition as set forth by Herod et al. The motivation would have been a reasonable expectation of providing the cured optical part with a high abbe number and high rigidity without brittleness and low tintability as disclosed by Toh et al—see column 6, lines 65 to end—in the absence of evidence to the contrary.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 2 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukushima et al (6,206,550 and 5,969,867).

Fukushima et al teaches active energy compositions and lens sheets therefrom. Said composition comprises:

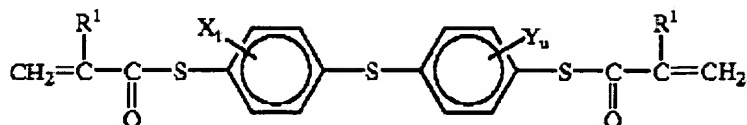
The present invention further provides an active energy ray-curable composition comprising

- (A) 20 to 80 parts by weight of a compound represented by general formula I above,
- (B-1) 10 to 90 parts by weight of at least one compound having at least two acryloyl or methacryloyl groups in the molecule,
- (B-2) 1 to 90 parts by weight of at least one monoacrylate or monomethacrylate compound having one acryloyl or methacryloyl group in the molecule, and
- (C) 0.01 to 5 parts by weight of an active energy ray-sensitive radical polymerization initiator with respect to 100 parts by weight of the total of components (A), (B-1) and (B-2).

General formula 1 appears to read on applicant's bifunctional methacrylic acid (thio) ester.

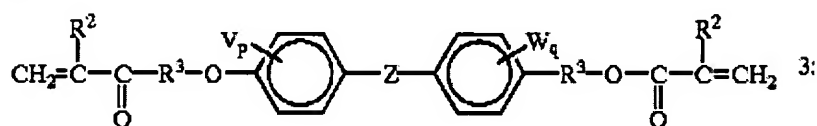
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I

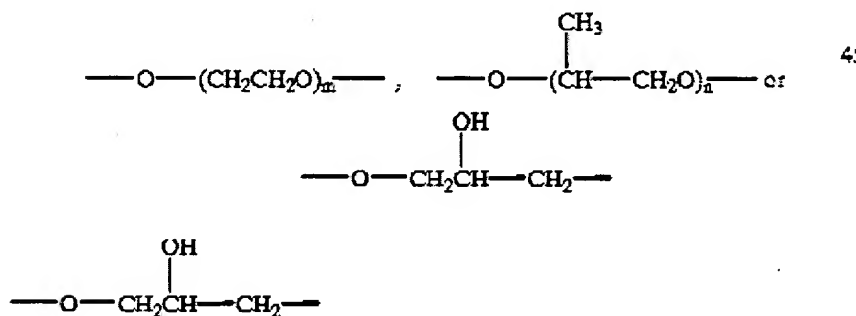


B-1 is set forth as a compound having the general formula II:

II



wherein R^2 represents hydrogen or methyl, V and W are the same or different and represent methyl, chlorine, bromine or iodine, p and q each independently represent an integer of 0-2, R^3 represents



wherein when

is selected it appears to anticipate instantly claimed general formula (1). Fukushima et al teaches these compositions are useful in making optical parts, such as lens sheets used as a prism sheet for a backlight unit—see column 9. These teachings appear to anticipate claims 2 and 22-24.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 2/17/07
Sanza McClendon

Examiner

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SMc